

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference MH504545-142	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/NZ2004/000213	International filing date (<i>day/month/year</i>) 9 September 2004	Priority date (<i>day/month/year</i>) 10 September 2003
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ E04B 1/84, E04C 3/07		
Applicant FLETCHER BUILDING HOLDINGS LIMITED et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of **3** sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (*sent to the applicant and to the International Bureau*) a total of **3** sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand 8 April 2005	Date of completion of the report 4 August 2005
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer VINCE BAGUSAUSKAS Telephone No. (02) 6283 2110

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NZ2004/000213

Box No. I **Basis of the report**

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1 (b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1, 3-6 as originally filed/furnished
 - pages* 2 received by this Authority on 12 July 2005 with the letter of 6 July 2005
 - pages* received by this Authority on with the letter of
- ☒ the claims:
- pages as originally filed/furnished
 - pages* as amended (together with any statement) under Article 19
 - pages* 7, 8 received by this Authority on 12 July 2005 with the letter of 6 July 2005
 - pages* received by this Authority on with the letter of
- ☒ the drawings:
- pages 1-6 as originally filed/furnished
 - pages* received by this Authority on with the letter of
 - pages* received by this Authority on with the letter of
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NZ2004/000213**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 1-13	YES
	Claims	NO
Inventive step (IS)	Claims 1-13	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-13	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

None of the citations listed in the International Search Report discloses that the flanges are substantially flat and lying in the substantially the same plane. Therefore the invention is novel and inventive over the prior cited art.

IP20 Rec'd PCT/PTO 10 MAR 2006

The present invention seeks to provide a framing system and components therefor which will enable appropriate sound attenuation in buildings in an effective manner and/or will at least provide the public with a useful choice.

5 Further objects of this invention will become apparent from the following description.

Summary of the Invention

10 According to the aspect of the present invention there is provided a plate for use in a sound attenuating building construction, first and second spaced apart flanges extending inwardly from respective opposite outer edges of said plate, said flanges being substantially flat and lying substantially in the same plane and each flange being adapted for securement in use to a respective element of said building construction, a resilient connection means extending between adjacent inner edges of said flanges, said resilient connection means consisting of a folded portion of the plate defining a single substantially "U" or "V" shape.

20 According to a further aspect of the present invention there is provided a building frame including at least a pair of spaced apart frame elements required to be connected together, at least one plate having first and second spaced apart flanges, said flanges extending inwardly from respective outer edges of said plate, and said flanges being substantially flat and lying in substantially the same plane, each flange being secured to a respective said element, a resilient connection means extending between adjacent inner edges of said flanges to space apart said elements, said resilient connection means consisting of a folded portion of the plate defining a single substantially "U" or "V" shape, the arrangement being such that sound acting directly or indirectly on said elements will result in movement of said resilient connection means to provide sound attenuation characteristics for a building construction in which said frame is incorporated.

30 Preferably each of said flanges is provided with a plurality of upstanding nails.

Alternatively each of said flanges is provided with a plurality of nail holes.

Optionally the plate may be in the form of a strip of indeterminate length.

35 Preferably each of said flanges adjacent said connection means is provided with respective upstanding location means for positioning the plate relative to the elements.

CLAIMS:

1. A plate for use in a sound attenuating building construction, first and second spaced apart flanges extending inwardly from respective opposite outer edges of said plate, said flanges being substantially flat and lying substantially in the same plane and each flange being adapted for securement in use to a respective element of said building construction, a resilient connection means extending between adjacent inner edges of said flanges, said resilient connection means consisting of a folded portion of the plate defining a single substantially "U" or "V" shape.
2. A plate as claimed in claim 1 in which each of the flanges adjacent said connection means is provided with respective upstanding location means for positioning the plate relative to the elements.
3. A plate as claimed in claim 2 in which said location means includes one or more projections.
4. A plate as claimed in any one of the preceding claims in which each of the flanges includes a plurality of upstanding nails or a plurality of nail holes.
5. A plate as claimed in any one of the preceding claims in the form of an elongate strip of indeterminate length.
6. A building frame including at least a pair of spaced apart frame elements required to be connected together, at least one plate having first and second spaced apart flanges, said flanges extending inwardly from respective outer edges of said plate, and said flanges being substantially flat and lying in substantially the same plane, each flange being secured to a respective said element, a resilient connection means extending between adjacent inner edges of said flanges to space apart said elements, said resilient connection means consisting of a folded portion of the plate defining a single substantially "U" or "V" shape, the arrangement being such that sound acting directly or indirectly on said elements will result in movement of said resilient connection means to provide sound attenuation characteristics for a building construction in which said frame is incorporated.
7. A building frame as claimed in claim 6 which said elements consist of spaced apart top plates, spaced apart bottom plates, and spaced apart studs..

8. A building frame as claimed in claim 6 or claim 7 in which a plurality of said plates are connected between respective pairs of said studs, pairs of said bottom plates and pairs of said top plates and wherein adjacent said plates being connected on alternate sides of said studs, bottom plates and top plates.
- 5 9. A building frame as claimed in any one of claims 6 to 8 in which the or each of the said plates is in the form of a strip of indeterminate length so as to extend along a required length of said frame elements.
10. A building frame as claimed in any one of claims 6 to 9 in the form of a prefabricated wall.
- 10 11. A building frame as claimed in claim 6 in which one of said elements is a masonry or concrete wall.
12. A building frame substantially as herein described with reference to any one of the embodiments of the invention and substantially as shown in Figures 1 and 2, Figure 3 and/or Figures 4 and 5 of the accompanying drawings.
- 15 13. A plate substantially as herein described with reference to any one of the embodiments of the present invention and substantially as shown in Figures 1 and 2 or Figure 3 of the accompanying drawings.